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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,682	11/10/2003	Carl K. Towley III	103.1.6/USA	4658
7590	07/12/2005		EXAMINER	
James W. Miller Suite 1005 Foshay Tower 821 Marquette Avenue Minneapolis, MN 55402			HOLZEN, STEPHEN A	
			ART UNIT	PAPER NUMBER
			3644	
DATE MAILED: 07/12/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/705,682	TOWLEY, CARL K.
	Examiner Stephen A. Holzen	Art Unit 3644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 May 2004.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-27 and 34-42 is/are pending in the application.
 4a) Of the above claim(s) 34-39 and 42 is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-27, 40 and 41 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 1/10/2005, & 11/10/2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) Notice of Informal Patent Application (PTO-152)
 6) Other: _____

DETAILED ACTION

Election/Restrictions

1. Claims 34-39 and 42 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention and species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 5/20/2005.
2. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claims 1 and 23 are objected to because of the following informalities:
Claim 1, Line 10: the word "coacting" is not the correct word. Appropriate correction is required.
Claims 23, lines 1-3: the wording in this claim is confusing. The frame does not allow the aircraft to be self powered, the engine and the propeller do this function. However the claim appears to recite otherwise.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:
The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-15, 20-25, 40 and 41 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A feature is taught as critical in the specification and is not recited in the claims resulting in a rejection of such claim non-enabling. (see *In re Mayhew* 527 F.2d 1229, 1233, 188, USPQ 356, 358 (CCPA 1976)). It should be appreciated that the applicant is not simply claiming his invention in a broad manner. The masts are actually a required, critical and essential feature of the present invention.

Please see ¶0041 of the present application.

"As shown in Fig. 2, each sleeve 42 is supported from the top of mast 34 by a sleeve control cable 44."

The invention claims in claims 1-15, and 20-25 are not enabled since the applicant has not enabled a sleeve that is slidably held relative to the riser lines without two masts and a control cable. The applicant has only enabled 2 sleeves each supported by a separate mast and control cable. The masts and control cables are critical for the invention to function as intended. See MPEP 2164.08(c).

6. Claims 1-15, 20-25, 40 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The frame is a separate element from the masts. The

applicant has not enabled a gathering device that connects with the frame (or in the alternative, has not enabled a gathering device (aka sleeve) suspended solely from the riser lines). Based on the applicant's disclosure, the claims are non-enabling since one of ordinary skill in the art would not know how to make or use the claimed invention.

7. Claims 1-15, 20-25, 40 and 41 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The applicant has not enabled how to make or use the invention having only one riser line gathering device (aka a sleeve). The applicant has only enabled two riser line gathering devices (aka sleeves) for each side of the aircraft.

8. Claim 2 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The applicant has not enabled a "control" as claimed. Instead the applicant has enabled a "control switch" and a "control cable", but not a "control". The examiner could not determine from the specification what all is meant by and encompassed by "a control" and one of ordinary skill in the art would not know how to make a aircraft with "a control".

9. Claims 3-25 and 40-41 are rejected under 35 U.S.C. 112, first paragraph, as being indefinite for failing to comply with the enablement requirement. The phrase "expansion of the riser lines" is indefinite since the examiner could not determine what all is meant and encompassed by the word "expansion". The lines do not in fact "expand" as claimed, that would require an inflatable riser line. Instead the riser lines "deploy". The applicant has not enabled one of ordinary skill in the art to use inflatable riser lines.

10. Claims 4-15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The applicant has not enabled how to make or use the invention having only one mast. The applicant has only enabled two masts for each side of the aircraft. One mast would not allow the aircraft to operate as disclosed/desired.

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

12. Claims 1-15, 20-25, 40 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-15, 20-25, 40 and 41 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted

elements are: two masts, a second gathering device (aka a sleeve), and two control cables.

13. Claims 3-25 and 40-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "expansion of the riser lines" is indefinite since the examiner could not determine what all is meant and encompassed by the word "expansion". The lines do not in fact "expand" as claimed, that would require an inflatable riser line. Instead the riser lines "deploy".

14. Claims 4-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4-15 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements are: two masts, a second gathering device (aka a sleeve). The applicant has only claimed 1 mast, however two masts, two control cables and two sleeves are required for the invention to function as disclosed.

15. Claims 8, 14, 26 and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Re – Claims 8, 26 and 27: The phrases "generally horizontal" and "generally vertical" in claims 9 and 26 are relative phrases which render the claim indefinite. The terms "generally horizontal" and "generally vertical" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. To what degree is something more "generally horizontal" than "generally vertical"? Is there a position between "generally horizontal" and "generally vertical" that is neither "generally horizontal" nor "generally vertical"?

Re – Claim 14: The phrase "outboard on the wing" in claim 14 is a relative term, which renders the claim indefinite. The phrase "outboard on the wing" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The applicant has provided an acceptable phrase in claim 15, where outboard is defined as at least $\frac{1}{2}$ the length of the wing.

Re – Claim 27: The term "more inflated" in claim 27 is a relative term which renders the claim indefinite. The term "more inflated" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. more inflated than what, and how inflated is "more"?

Drawings

16. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the

- Aircraft with NO MASTS must be illustrated, if applicant believes that the claims satisfy 112 1st, and 2nd paragraphs, as presently claimed
- An aircraft with no control cables, as presently claimed.
- A Control (see Claim 2)
- One (and only one) riser line, if the applicant believes that the claims satisfy 112 1st, and 2nd paragraphs

must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

17. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5, 20,22, 26 and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by St. Clair et al (6,622,968). St. Clair et al disclose a frame (#20) having at least one seat for carrying a pilot (not specifically numbered, but illustrated in Figures 2 and 14), a parachute forming a collapsible and inflatable wing (#25: a Ram-Air parachute, inherent that ram-air parachutes act like wings, and provide very small, yet not insignificant amount of lift), a plurality of riser lines connecting the parachute to the frame (#40 and #90), at least one riser line gathering device (aka sleeve) slidably connected to the riser lines (#75 and #95), further including a "control" for allowing the pilot to start and stop relative sliding motion (#40 and #45), #20A and #20B are vertical masts that support the sleeve, a fist pulley (#45) and a fly-by-wire apparatus (#40, 45)

that is selectively operable and capable of adjusting the vertical position of the parachute (and thus indirectly adjusting the position of the sleeve), a wing elevating cord (#40) extending between the frame and the parachute, and wherein the frame carries an engine (ATV's have engines)

The functional language "for gathering in the rise lines...wing inflation during takeoff" does not serve to patentably distinguish the invention from the prior art. While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)

In order to be given patentable weight a functional recitation must be expressed as a "means for" performing the specified function, as set forth in 35 USC 112 ¶6, and must be supported by a recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D.172; 388 O.G. 279.

It should be appreciated that St. Clair et al is capable of performing the claimed function since the pulley and winches are in a slidable relationship with the riser lines and are capable of gathering in and deploying the riser lines.

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. Claims 1- 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nicolai et al (6,808,114) in view of Bowen (4,108,402).

Re – Claim 1: Nicolai disclose a parachute supported payload (that resembles a plane) having a parachute forming a collapsible and inflatable wing (see Ram-Air Canopy 102) a plurality of riser lines (110R & 110L) and at least one riser line gathering device slidably connected to the riser lines (see pulleys 228 and winch 208 which are both “slidably connected to the riser lines”). Nicolai et al do not disclose an aircraft with a frame and a pilot seat. Bowen however does teach these limitations (necessarily the plane of Bowen is a parachute supported aircraft having spars and stringers forming the frame, and a pilot seat within the cockpit). It would have been obvious to replace the aircraft shaped payload of Nicolai et al with the aircraft of Bowen in order to remotely control the decent of a plane where the pilots have become incapacitated.

The functional language “for gathering in the rise lines...wing inflation during takeoff” does not serve to patentably distinguish the invention from the prior art.

While features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of

structure rather than function. *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997)

A claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. *Ex parte Masham*, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987)

In order to be given patentable weight a functional recitation must be expressed as a "means for" performing the specified function, as set forth in 35 USC 112 ¶6, and must be supported by a recitation in the claim of sufficient structure to warrant the presence of the functional language. *In re Fuller*, 1929 C.D.172; 388 O.G. 279.

It should be appreciated that Nicolai et al is actually capable of performing the claimed function since the pulley and winches are in a slidable relationship with the riser lines and are capable of gathering in and deploying the riser lines.

Re – Claim 2: Nicolai et al discloses a "control" #302. It should be appreciated that "the control" #302 is capable of allowing a pilot on the ground or even a pilot within the cockpit to steer the plane (Col. 1, line 40).

Allowable Subject Matter

20. Claims 6-19, 21, 23-25, 40 and 41 have not been rejected over art. The prior art does not illustrate 2 tubular sleeves and 2 vertically extending masts for reefing the parachute, via two control cables.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- A. J. Steinthal (2,972,457) discloses a tubular mast, where the parachute is deployed from within, and retractable via a winch, however uses a drogue type parachute, which is not a wing and is primarily used as a braking device
- Bowen (4,108,402) discloses a parachute supported aircraft that could have been used to reject claims 1, 3 and 26.
- M. K. Bowden et al teaches tubular and flared (trumpeted) shaped sleeve having riser lines therein, and a winch, however does not disclose masts, or a wing. The parachute of Bowden et al is a drogue type parachute that is used for braking and not for creating lift or for steering (as wings are used for.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen A. Holzen whose telephone number is 571-272-6903. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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